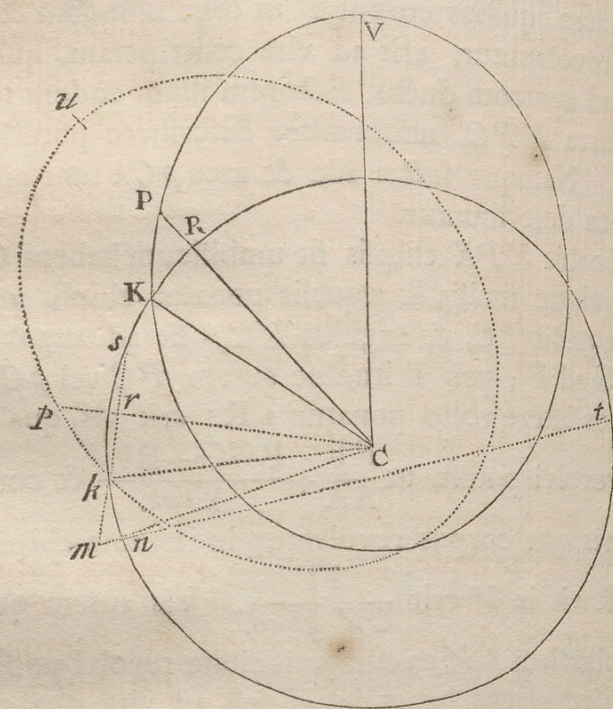


DE MOTU  
CORPORUM

fit ad seipsam in altitudine  $CV$  ut  $\frac{1}{A \text{ cub.}}$  ad  $\frac{1}{CV \text{ cub.}}$  eadem differentia in omni altitudine  $A$  valebit  $\frac{RGG-RFF}{A \text{ cub.}}$ . Igitur ad vim  $\frac{FF}{AA}$ , qua corpus revolvi potest in ellipsi immobili  $VPK$ , addatur excessus  $\frac{RGG-RFF}{A \text{ cub.}}$ ; & componetur vis tota  $\frac{FF}{AA} + \frac{RGG-RFF}{A \text{ cub.}}$  qua corpus in ellipsi mobili  $upk$  iisdem temporibus revolvi possit.

Corol. 3. Ad eundem modum colligetur quod, si orbis immobilis



$VPK$  ellipsis sit centrum habens in virium centro  $C$ ; eique similis æqualis & concentrica ponatur ellipsis mobilis  $upk$ ; sitque  $2R$  ellipseos hujus latus rectum principale, &  $2T$  latus transversum sive axis major, atque angulus  $VCP$  semper sit ad angulum  $VCP$  ut  $G$  ad  $F$ ; vires, quibus corpora in ellipsi immobili & mobili temporibus æqualibus revolvi possunt, erunt ut  $\frac{FFA}{T \text{ cub.}}$  &  $\frac{FFA}{T \text{ cub.}}$  +  $\frac{RGG-RFF}{A \text{ cub.}}$  respective.

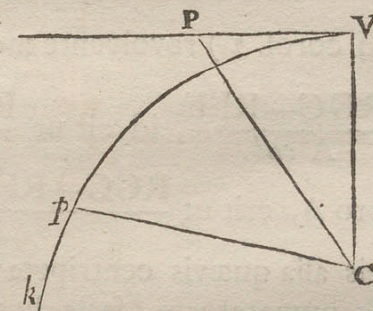
Corol.

LIBER  
PRIMUS.

Corol. 4. Et universaliter, si corporis altitudo maxima  $CV$  nominetur  $T$ , & radius curvaturæ quam orbis  $VPK$  habet in  $V$ , id est radius circuli æqualiter curvi, nominetur  $R$ , & vis centripeta, qua corpus in trajectory quacunque immobili  $VPK$  revolvi potest in loco  $V$ , dicatur  $\frac{VFF}{TT}$ , atque aliis in locis  $P$  indefinite dicatur  $X$ , altitudine  $CP$  nominata  $A$ , & capiatur  $G$  ad  $F$  in data ratione anguli  $VCP$  ad angulum  $VCP$ : erit vis centripeta, qua corpus idem eodem motus in eadem trajectory  $upk$  circulariter mota temporibus iisdem peragere potest, ut summa virium  $X + \frac{VRGG-VRFF}{A \text{ cub.}}$ .

Corol. 5. Dato igitur motu corporis in orbe quocunque immobili, augeri vel minui potest ejus motus angularis circa centrum virium in ratione data, & inde inveniri novi orbis immobiles in quibus corpora novis viribus centripetis gyrentur.

Corol. 6. Igitur si ad rectam  $CV$  positione datam erigatur perpendicularum  $VP$  longitudinis indeterminatæ, jungaturque  $CP$ , & ipsi æqualis agatur  $Cp$ , constituens angulum  $VCP$ , qui sit ad angulum  $VCP$  in data ratione; vis qua corpus gyri potest in curva illa  $Vpk$  quam punctum  $p$  perpetuo tangit, erit reciproce ut cubus altitudinis  $Cp$ . Nam corpus  $P$  per vim inertiae, nulla alia vi urgente, uniformiter progredi potest in recta  $VP$ . Addatur vis in centrum  $C$ , cubo altitudinis  $CP$  vel  $Cp$  reciproce proportionalis, & (per jam demonstrata) detorquebitur motus ille rectilineus in lineam curvam  $Vpk$ . Est autem hæc curva  $Vpk$  eadem cum curva illa  $VPQ$  in corol. 3. prop. xli. inventa, in qua ibi diximus corpora hujusmodi viribus attracta oblique ascendere.



PROPO.